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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/632,261

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Kent Charles Burr

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

VARGOT, MATHIEU D

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

05/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/632,261	Applicant(s) BURR, KENT CHARLES	
	Examiner Mathieu D. Vargot	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1.Applicant is requested to cancel non-elected claims 1-25 to expedite prosecution.

2.Claims 26-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has amended claim 26 to recite “complex anisotropic portions” and an electronic check shows that there is no occurrence of the term “complex” in the instant specification as filed. The term “complex” is a relative term, and it is not clear exactly what such would encompass in the context of the instant specification. Applicant is requested to point out where support exists for this term or delete it from the claims.

3.Claims 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 now recites at lines 7 and 8 a three-dimensional pattern comprised of scintillator material having “a complex anisotropic portions”, so it is the anisotropic portions that constitute the three-dimensional pattern—ie, apparently, they are one and the same. However, the last, newly added paragraph of claim 26 recites “said complex anisotropic portions **and** said three-dimensional pattern are **together** configured via at least one of a plurality of optical properties...”. It is submitted that the terms “and” and “together” are indefinite since the three-dimensional pattern is in fact made up of the

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anisotropic portions. Also, the term “complex” is indefinite as it is unclear exactly what this means with respect to the anisotropic portions. Finally, it is not clear exactly what the language “configured via at least one of a plurality of optical properties” means and clarification is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbeil et al in view of either of Mir et al or Borrelli et al essentially for reasons of record noting the following.

Corbeil et al is still believed to provide the basic claimed process, lacking essentially the formation of “complex anisotropic portions” at the spots where the pulsed laser is focused. Instead of these, voids are produced. However, the secondary references each disclose that such a laser would be used to generate anisotropic portions in a waveguide material that would be similar to that used as the scintillator in the primary reference. It is maintained that one of ordinary skill in the art would have realized from the secondary references that anisotropic portions would be made by the laser rather than voids, and that such would have been obvious dependent on the exact boundary desired between the scintillator cells or segments. The instant specification indicates as much, as paragraph 0017 discloses that the anisotropic properties can be changed or that voids can be made. It is submitted that the scintillator of Corbeil et al

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functions in the instant manner of controlling the spread of photons to achieve “desired signal sharing among the plurality of regions having borders...” and that the three-dimensional pattern is configured to preserve spatial information concerning the origin of the photons, the aspect of a reliable centroid determination being implicit in the latter property.

5. Applicant's arguments filed March 20, 2009 have been fully considered but they are not persuasive. While a new matter and an indefiniteness 112 rejection have been made, the art rejection remains the same. While applicant submits that Corbeil et al is directed only to optical segmentation, it is submitted that the segmentation taught therein is in reality the same as the instant. It is believed that the sharing of photons—ie, the instant optical sharing—occurs within the optical boundaries of the segments in Corbeil et al to the same extent as it occurs in the instant application and that is what allows the scintillator to decode or determine where the photons originated therefrom. Hence it is not clear that the instant optical sharing is any different than that in Corbeil et al, contrary to applicant's arguments. Applicant states that the instant invention “relies on sharing of light between elements and does not...without...”—ie, light is intentionally lost to neighboring elements—see paragraph 4 of page 10 of the amendment. However, there does not appear to be any support for this aspect in the specification as filed and applicant is requested to show where such is supported. Since the aim of the scintillator in Corbeil et al is to decode the radiation—ie, determine where it comes from—it would appear that the scintillator taught therein has the instant functionality of “preserving spatial information allowing reliable centroid determination”. Simply

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because these exact words are not found in Corbeil et al is not an indication that such is in fact not occurring. It is respectfully submitted that the scintillator of Corbeil et al functions in the exact same manner as the instant, except that Corbeil et al uses voids and the instant claims call for "complex anisotropic portions" to form the boundaries. However, these boundaries trap the photons therewithin and allow sharing within the boundary, but not outside of the boundary.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on 571 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot
May 25, 2009

/Mathieu D. Vargot/
Primary Examiner, Art Unit 1791